REMARKS/ARGUMENTS

The Examiner rejects Claims 1-20 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as the invention. The Examiner rejects Claims 1-4 and 6-20 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,496,568 to Nelson. The Official Action also rejects Claims 1 and 5 as being anticipated under 35 U.S.C. § 102(e) by U.S. Patent No. 6,246,320 to Monroe.

A.   Rejections under 35 U.S.C. § 112, Second Paragraph

The Examiner raises several rejections under 35 U.S.C. § 112, second paragraph. In particular, the Examiner finds that the preamble of Claims 1, 3-9, 11-15, and 19 fails to distinguish what is being claimed because both a system and method are recited. The Examiner believes that the step of "detecting an event of a plurality of events" is not defined within the specification and is also confused with the multiple use of "event" in the claims. Similarly, the Examiner finds that the multiple use of the term "response" renders the claim indefinite and recommends labeling each event and response (e.g., first event and second event). With respect to Claims 2, 10, 16-18, and 20, the Examiner believes that labeling is also required to distinguish the multiple use of "travel-related event" and "activity." Moreover, the Examiner finds that the phrases "generic information" and "individual information" recited in Claims 15 and 18 are relative and, thus, are indefinite.

In order address the rejections regarding the preamble of the claims, independent Claims 1 and 2 have been amended to clarify that each of the claims recite methods for notifying entities of events. However, Applicants respectfully disagree with the rejection of independent Claim 9, where the preamble of the claim recites a computer-readable medium containing instructions for controlling a data processing system to perform a method for notifying entities of events. Thus, Claim 9 recites a computer-readable medium, which as described in the present application and known to those of ordinary skill in the art, could be a memory, a secondary storage device (e.g., CD-ROM), a carrier wave from the Internet, a digital or optical signal, RAM or ROM, or other

computer-readable media, upon which software may be stored as executable instructions to control a data processing system and perform a method for notifying entities of events.

Applicants have also labeled the terms event, response, travel-related event, and activity as recommended by the Examiner to further clarify the claims. However, we disagree with the Examiner's statement that "plurality of events" is not defined, as an "event" is clearly defined in the specification of the present application (See ¶ 10 and ¶ 26). Applicants submit that it is evident that a plurality of events corresponds to two or more events.

Moreover, Applicants have amended Claims 15 and 18 to overcome the Examiner's finding that "generic information" and "individual information" are relative and, therefore, indefinite. Accordingly, Applicants have amended Claims 15 and 18 to recite that the first type of events is information "associated with a plurality of entities" and the second type of events is "associated with only a single entity."

Therefore, in light of the amendments and comments presented above, Applicants submit that the rejections of Claims 1-20 under 35 U.S.C. § 112, second paragraph are overcome.

B.   Rejections under 35 U.S.C. § 103(a)

The Official Action rejects independent Claims 1, 2, 9, and 10 under 35 U.S.C. § 102(e) as being anticipated by Nelson. Nelson discloses a method and apparatus for providing automated notification to a customer of a real-time notification system. The system provides notification to subscribers based on some notification event, including notifying airline customers of changes in airline information which affects their travel plans (e.g., a flight schedule event such as a flight cancellation, a flight status event such as boarding, or marketing events such as an incentive to change flights). The notification can occur using various communication devices, such as pagers, cell phones, email, etc. As opposed to notifying all customers, selected groups of customers may be notified with the groups being based on some predetermined criteria, such as frequent-flier level, class of service, or price of the ticket, such that the selected groups or individual customers are given preferential treatment. A customer

message manager may be employed to notify a set of subscribers based on relevant changes in information. In one embodiment disclosed by Nelson, the customer message manager polls an airline system to receive airline information, evaluates the information to determine notification events, determines a set of customers to provide notification of the general notification event, and initiates notification to the set of customers in the order identified by a predetermined criteria.

The Official Action also rejects independent Claim 1 under 35 U.S.C. § 102(e) as being anticipated by Monroe. Monroe discloses a ground linked, on-board security surveillance system for aircraft and other commercial vehicles. The system provides flight crew and/or a ground tracking station for commercial aircraft with critical information during flight and/or records information and data generated during flight for later reconstruction of catastrophic events. The system also provides ground security and surveillance, but also tracking while in port, on the ground, or in route. A communications link, such as digital wireless communication, is provided between stationary and mobile vehicles on the ground, the vehicle being monitored, and strategic sensors both onboard the commercial transport and the sensors on the ground. Thus, data may be communicated between the transport, ground or base stations, remote sensor systems, remote or mobile monitoring systems, and other transports. The ground station may monitor and/or determine the identity, location, and heading of any vehicle, as well as sensor information, emergency conditions, maintenance information, etc. The system may transmit any detected information to a monitor system located at a ground control security station (e.g., fire station).

Independent Claim 1 of the present application has been amended to recite detecting a first event of a plurality of events, wherein detecting the first event includes monitoring information from a memory for the occurrence of an event and publishing the first event upon occurrence of the first event. Claim 1 also recites automatically transmitting a notification to a first entity of the first event, wherein the first entity has previously subscribed to receive notification of the first event. Independent Claim 9 includes similar recitations in the context of a computer-readable medium, while independent Claims 2 and 10 also include similar recitations in the context of a method and data processing system, respectively, for notifying entities of travel-related events.

As recited by each independent claim, the claimed invention relies upon publish and subscribe or like technology to be notified of the occurrence of the various events. As recited in paragraph 28 of the present application:

> Publish and subscribe technology provides tools and infrastructure for publishing and subscribing to events. For example, a publish and subscribe system may track the scheduled departure and arrival time of flights. If a flight reports a delay, the event driven technology will be triggered and will send notification to those entities that have made a request. Software components are incorporated into the publishing applications and receiving applications, which allows them to interact with the network and each other. An additional component may be a notification service that distributes data to entities via a designated device. This may be done through a device independent server that translates a data/message to any type of device.

As further described by the present application, a source system publishes events as they occur and updates the published information as information is received or changed (See ¶ 42 and ¶ 46). For example, the source system could publish that Flight 732 has been delayed for 45 minutes, and the event will be detected and an entity notified if the entity has subscribed to receive information associated with Flight 732. FIGS. 5A and 5B illustrate an exemplary publication, where a Gantt chart is employed to display departure and arrival times for aircraft. An entity subscribes to receive notification of one or more events, and a system is capable of determining whether the entity has previously subscribed to prevent duplicative requests. Once the system has subscribed to an event, the system "listens" for the event and may detect publication of those events to which it has subscribed. By providing a network and using publish/subscribe technology, entities may continuously receive notification of events as they occur. In addition, entities can subscribe to a component on the network and automatically receive notification of events without initiating additional requests.

In contrast, <u>neither Nelson nor Monroe teach or suggest monitoring information from a memory for the occurrence of an event and **publishing** an event upon occurrence of the event</u>, as recited by independent Claims 1, 2, 9, and 10. Nelson discloses that a Customer Message Manager ("CMM") is capable of polling airline databases and based on notifier rules, a notifier and updater system determines what events require customer notification. The Examiner finds that polling airline databases is equivalent to monitoring a system that publishes events.

However, the database disclosed by Nelson does not utilize publish/subscribe technology as recited in Claim 1. As known to those of ordinary skill in the art, publish/subscribe technology publishes events as they occur and provides reduced server load in comparison to polling technology. In addition, Nelson discloses that the database represents an airline reservation system and other databases maintained by an airline or their representatives. Applicants submit that there is a distinct difference between an airline database that simply maintains flight, frequent flyer, ticketing, and other information and a system that utilizes publish/subscribe technology to publish events upon occurrence and detect specified events that a particular subscriber is interested in receiving notification. Thus, Nelson requires the CMM to poll airline databases for changes or updates (i.e., pull technology), while the publish/subscribe technology of the claimed invention provides real-time updates and automatically provides notification of a requested event to subscribers upon the occurrence of an event (i.e., push technology).

Monroe shares similar shortcomings as Nelson. More specifically, Monroe discloses that a surveillance system may transmit detected information to a monitor system located at a ground control security station. The Examiner finds that transmitting information from a surveillance system to a monitoring station is equivalent to publishing events. However, the monitoring system disclosed in Monroe is not monitoring the surveillance system for the occurrence of an event based on information that has already occurred and been stored in a memory or database. Similarly, the surveillance system does not monitor information that is stored in a memory. Rather, the surveillance system employs sensing units, such as motion detectors, fire sensors, door sensors, etc., to detect current information for security and surveillance purposes. In fact, Monroe teaches away from storing surveillance-related information, as timing would be imperative for responding to emergencies or other events where time is of the essence. Thus, as described above, the publish/subscribe technology of the present application is distinctly different than surveillance/communication system disclosed in Monroe. For instance, Monroe does not monitor information stored in a memory for the occurrence of an event, such as the Gantt chart shown in FIGS. 5A and 5B of the present application. In this regard, the present invention is capable of monitoring the chart for any changes, such as a delay in a flight, and then publishing any change that occurs when the change occurs. Accordingly, Monroe does not

disclose that the surveillance system or sensors are employed to monitor information maintained in a memory, publish an event upon the occurrence of the event, and then automatically notify subscribers of the occurrence of the event. As such, the publish/subscribe technology of the present application is patentably distinct from the monitoring/transmission system disclosed in Monroe.

Applicants also submit that neither Nelson nor Monroe disclose determining whether a first entity has previously subscribed to receive notification of an event, as recited by amended independent Claims 1, 2, 9, and 10. As described above, the present application discloses a system that employs publish/subscribe technology, which allows subscribers to request notification of specified events that are published. The present application also discloses that a system may determine whether an entity has previously subscribed for an event, such as to prevent multiple requests or allow an entity to subscribe to certain events. Although Nelson discloses a system that "determines a set of subscribers" to provide notification of a notification event, Nelson does not disclose that the system includes determining whether the subscriber previously subscribed to receive notification of the event. Claim 1 not only requires that the entity has previously subscribed to receive notification of an event, but also determines whether the entity has previously subscribed. Thus, there is a separate verification of the registration status of the entity.

Monroe also does not determine whether a first entity has previously subscribed to receive notification of an event. The Examiner finds that although Monroe does not explicitly disclose that a first entity has previously subscribed to receive notification of an event or determine whether the first entity has previously subscribed to receive notification of the event, the Examiner believes this is inherently disclosed because Monroe discloses sending notification of events to terminal and/or safety sites and that "selected personnel are signaled." Even assuming that Monroe discloses that a first entity has previously subscribed to receive notification of an event, Monroe does not teach or suggest that there is any verification of this registration. *MPEP* § 2112 requires that one of ordinary skill in the art would recognize that the system of Monroe not only transmits notification to subscribers but also first determines whether the entity has already subscribed to receive notification. Applicants submit that registering to

receive notification and/or verification of registration is simply not taught or suggested by Monroe.

Although discussed above in conjunction with Claim 1, the other independent claims share similar recitations. In particular, neither Nelson nor Monroe, taken alone or in combination, teach or suggest, detecting a first event of a plurality of events, where the detecting of the first event includes monitoring information from a memory for the occurrence of an event and publishing the event upon occurrence of the first event, automatically transmitting a notification to a first entity of the first event, and determining whether the first entity has previously subscribed to receive notification of the first event as recited by amended independent Claims 1, 2, 9, and 10. As such, the rejection of Claims 1, 2, 9, and 10 under 35 U.S.C. §102(e) is overcome.

CONCLUSION

In view of the amendments and remarks presented above, it is respectfully submitted that all of the present claims of the present application are in condition for immediate allowance. It is therefore respectfully requested that a Notice of Allowance be issued. The Examiner is encouraged to contact Applicants' undersigned attorney to resolve any remaining issues in order to expedite examination of the present application.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.
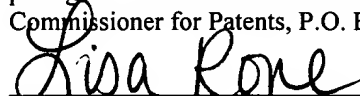
Respectfully submitted,

Trent A. Kirk
Registration No. 54,223

Customer No. 00826
ALSTON & BIRD LLP
Bank of America Plaza
101 South Tryon Street, Suite 4000
Charlotte, NC 28280-4000
Tel Charlotte Office (704) 444-1000
Fax Charlotte Office (704) 444-1111
CLT01/4718138v1

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Lisa Rone